

Claims

1. Microcomponent comprising a hermetically-sealed microcavity (6),
5 delineated by a cover (4) in which at least one hole (5) is formed, and, on the
cover (4), a sealing layer (9) hermetically sealing the microcavity (6),
microcomponent characterized in that it comprises, under the sealing layer
(9), a plug (8) covering the hole (5) and a part of the cover (4) over the
10 periphery of the hole (5), the plug (8) being made of a material that is able to
undergo creep deformation.

2. Microcomponent according to claim 1, characterized in that the material
that is able to undergo creep deformation is a polymerized material.

15 3. Microcomponent according to claim 2, characterized in that the
polymerized material is selected from photoresists and polyimide.

4. Microcomponent according to claim 1, characterized in that the material
that is able to undergo creep deformation is a glass.
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5. Microcomponent according to claim 4, characterized in that the glass is
selected from phosphosilicate glasses.

6. Microcomponent according to any one of the claims 1 to 5, characterized
25 in that a dimension of the hole (5) is smaller than 5 micrometers.

7. Microcomponent according to any one of the claims 1 to 6, characterized
in that the hole (5) is arranged on the highest part of the microcavity (6).

30 8. Microcomponent according to any one of the claims 1 to 7, characterized
in that it comprises a plurality of holes (5).

9. Microcomponent according to any one of the claims 1 to 8, characterized in that the thickness of the plug (8) is comprised between 2 and 6 micrometers.

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10. Microcomponent according to any one of the claims 1 to 9, characterized in that the plug (8) comprises sloping sides (10).

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11. Method for production of a hermetically-sealed microcavity (6) of a microcomponent according to any one of the claims 1 to 10, successively comprising

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- deposition of a sacrificial layer (3) on a substrate (2),
- deposition of a layer forming the cover (4), on the substrate (2) and sacrificial layer (3),
- etching, in the cover (4), of at least one hole (5) opening out onto the sacrificial layer (3),
- removal of the sacrificial layer (3), via the hole (5), so as to create the microcavity (6),
- deposition of the sealing layer (9), so as to seal the microcavity (6) hermetically,

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method characterized in that it comprises deposition of the plug (8) covering the hole (5) and a part of the cover (4) over the periphery of the hole (5), after the sacrificial layer (3) has been removed and before the sealing layer (9) is deposited.

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12. Method according to claim 11, characterized in that, the plug (8) being made of phosphosilicate glass, the plug (8) is obtained by a method selected from the sol-gel methods and cathode sputtering.

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13. Method according to claim 11, characterized in that the plug (8) is made of a porous material.

14. Method according to claim 13, characterized in that, the porous material being a photoresist, the method comprises a high temperature annealing step.

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15. Method according to one of the claims 13 and 14, characterized in that the method comprises a pumping step of the gas contained in the microcavity (6), through the porous material, before the sealing layer (9) is deposited.

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